August 25, 2006

Public Notice for 401 Certification
and/or
Waste Discharge Requirements (Dredge/Fill Projects)

Instream Gravel Bar Skimming and Revegetation Project
Middle Reach of the Russian River
Sonoma County, California

On November 18, 2005, the Regional Water Quality Control Board, North Coast Region (Regional Water Board) received an application from Syar Industries, Inc. (Syar) requesting a Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects) for the for the Instream Gravel Bar Skimming and Revegetation Project (Project) located in the Middle Reach of the Russian River, Sonoma County, California. The application, submitted according to administrative regulations and Clean Water Act (CWA) Section 401, covers disturbance to the waters of the United States associated with gravel extraction and associated activities within the Russian River Hydrologic Unit No. 114.00.

Syar proposes to skim two gravel bars including: (1) Bar 2, north bank of Russian River, at approximately river mile 33 (distance from the Pacific Ocean), and (2) Bar 13, west bank of Russian River, at approximately river mile 29, in the Middle Reach of the Russian River, near Healdsburg, California. The project is proposed to begin in late summer 2006 and end prior to October 2006. Syar proposes to mine 59,000 cubic yards from Bar 2 and 63,000 cubic yards from Bar 13. Both bars were last mined in 2002 under the 1997 Environmental Impact Report/Environmental Impact Statement (EIR/EIS) certified by the State Mining and Geology Board (SMGB). Gravel extraction will be accomplished by skimming aggraded areas of each bar, defined by a plane starting one foot above the water level of the low flow channel (250-300 cfs) at the downstream end and extending longitudinally at approximately a 0.1 percent gradient up the bar until it intercepts the interior slopes of the buffer; the lateral limits of the plane are defined by a 2:1 slope along the riverbank and along the inside slopes of a buffer bordering the low flow channel.

Skimming operations will establish a final gradient devoid of isolated pockets or holes to minimize fish entrapment during subsequent high flow events. The total project area encompasses approximately 18.3 acres of gravel bars. No operations are proposed in the wetted stream, or below water level. An instream temporary crossing will be constructed at the south end of Bar 2, and will utilize gravel abutments and a 40 foot span over the river. This crossing will temporarily impact approximately 0.115 acres within the stream channel.

The SMGB is the lead agency under the California Environmental Quality Act and National Environmental Policy Act. An independent Scientific Review Committee (SRC) was established by SMBG to assess the impacts of the mining and reclamation activities proposed by Syar on its vested instream mining sites in the Middle Reach of the Russian River (State Mine ID# 91-49-0028). The SRC is to provide objective, science-based analysis, recommendations, and peer review of Syar's annual mining and reclamation plans. Syar is to revise the annual mining and reclamation plan, if necessary, to meet the requirements of other agencies and to incorporate the recommendations of the SRC to help assure that adverse environmental impacts are minimized and performance standards are met. Sonoma County Permit and Resource Management Department (PRMD) will allow Syar to implement the mining and reclamation plans provided they include the SRC recommendations.

In addition to conditions set forth by the Regional Water Board, additional conditions are imposed by the County of Sonoma, California Department of Fish and Game, U. S. Army Corps of Engineers (ACOE), State Mining and Geology Board, National Marine Fisheries Service, and the recommendations made by the SRC.

Specific recommendations made by the SRC in their August 24, 2006 document, and concurred with by the Regional Water Board, are summarized below. The full text of the recommendations from the SRC document is available on-line at: 060824_SRC_Syar.pdf

Summary of SRC Recommendations
The SRC recommends that Sonoma County and jurisdictional agencies approve the 2006 mining plans as depicted in the Syar 2006 Existing Conditions and Gravel Harvest Plans for Bar 2 and Bar 13, with the additional recommendations for revisions to the Plans as described below. The SRC supports all other aspects of the 2006 proposed mining plans, including the lateral setbacks from the low-flow channel for both bars, and the low-water discharge openings as proposed for Bar 13. It is additionally recommended that Syar prepare revised 2006 mining plans that reflect the SRC recommendations, and submit the revised plans to Sonoma County PRMD, jurisdictional agencies, and the SRC.

1. Improve Buffer at head of Bar 2
The SRC recommends that the buffer area at the head of Bar 2 be improved by increasing the average elevation by 2 feet over existing conditions. This would require approximately 5,500 cubic yards of material. The increased height of the bar buffer should extend from the upstream most point of the bar to approximately a 640 ft linear distance downstream on the bar. The additional material can be obtained from the proposed 59,000 cubic yards to be taken from Bar 2. The SRC further recommends that willow wattles collected from on-site or nearby sites be buried in the bar head fill material, and that the new material be compacted in place by track-walking the mining equipment over this added buffer material. These willows should sprout and take root, aiding in the stabilization of the sediment at the head of the bar. The intent is to establish a bar head buffer that is higher and more stable as the vegetation takes root and grows, reducing scour across the bar and reducing the risk of forming an inside chute channel or dissection that results in a midchannel bar.

2. Transplanting of Important Vegetation on Bar 2
Following the Spring 2006 flows, cottonwood and willows have established along the low elevation area created by the remnants of the inside chute channel. Although this vegetation does not meet the criteria of a 'significant stand' of riparian vegetation, regeneration is important for natural successional processes on the bar and for maintaining riparian structural and compositional diversity and complexity along the river. The SRC recommends that the newly established cottonwoods and willows along this remnant channel be transplanted rather than removed under the 2006 Syar mining plan. The transplant location can be in the same general area from where they are removed, but at a higher elevation, closer to the riverbanks (i.e., on the inside of the bar) or adjacent to an existing patch of buffer vegetation. In addition, an as-built map and summary of the methods employed should be included in a post-transplant summary report. Monitoring for at least 5 years is also recommended, following the methods outlined in Appendix F of the Supplemental Draft (EIR/EIS).

3. Revise Finished Grade of the Bar 13
Bar 13 currently contains areas where stranding may occur. These areas should be corrected as part of the proposed mining. The 2006 Existing Conditions and Gravel Harvest Plan indicates a proposed bar grade of 0.08 percent. To minimize the potential for fish stranding, the finished grade of Bar 13 after mining should slope toward the downstream end of the bar or toward low water discharge exits at a gradient of not less than 0.1 percent. Additionally, the finished mined surface should be left without depressions that could hold water as the bar drains following subsequent inundation events. This includes the inside of the riparian buffer zone adjacent to the low-flow channel and along the base of high bank on the inside of the bar. These are areas where fish could be trapped as flows recede. The first recommended measure will encourage fish to move toward the main channel as flows inundating the bar decline toward baseflow levels. The second recommendation will eliminate deeper pockets of water on the bar where fish may hold as the water level declines.

4. Improve Buffer at Head of Bar 13
The SRC recommends improving the buffer at the head of the bar. This improvement should be accomplished by increasing the size of the head of bar buffer; by excluding from the proposed 2006 harvest area a triangular shaped section that is approximately 1/4-acre (10,000 sq ft) in size at the very upstream end of the bar. By including this buffer area, proposed mining cuts 3-4 feet in depth will be eliminated at the bar head, effectively maintaining existing elevations.

5. Compliance with Mitigation Requirements for Revegetation of Bar 2 and Bar 13
Following the 2002 mining Syar conducted a revegetation effort on both Bars 2 and 13 to promote good stewardship. The State Mining and Geology Board approved the bar skimming plan (Appendix C, Reclamation Plan for Syar Middle Reach Vested Rights Gravel Bars Limited Bar Skimming and Adaptive Management State Mine I.D. #91-49-0028), stating :'*… that the mitigation measures presented in the EIR/EIS have been adopted as conditions of approval of the Project. These mitigation measures will reduce all significant and potentially significant impacts (those not identified as significant and avoidable) to a less-than-significant level.'* Also, the State Mining and Geology Board states in the Notice of Determination that the mitigation measures were made a condition of the approval of the project. The revegetation that was conducted on Bars 2 and 13 were proposed mitigation measures. Based on the Mitigation Monitoring Program, any plans for riparian revegetation or restoration were supposed to incorporate the guidelines in Appendix F of the Supplemental Draft EIR/EIS. This plan outlines specific information on site preparation, planting methods, and criteria for success. If plant survival drops below 75% during the first or second year, the contractor is required to re-plant to provide 100% survival and the potential causes for failure were to be investigated. Syar did monitor the vegetation following the planting; which largely failed on both bars with survival rates well below the criteria levels for replanting. Possible reasons for failure were discussed in the reports; however, re-planting has not occurred to date. Re-planting was identified as a possibility in subsequent monitoring reports, awaiting the formation of the SRC. Therefore, the SRC recommends that Syar implement revegetation following the 2006 mining on both Bar 2 and Bar 13, as the past revegetation efforts failed. The locations for placement of the vegetation should consider future fluvial geomorphic and flow conditions across the bar based on the as-built topography. The SRC recommends that the re-vegetation be implemented either towards the inside of the bars near the river banks or adjacent to existing woody riparian vegetation within the riparian buffer. The material should be planted and irrigated (as needed) following the methods outlined in Appendix F of the Supplemental Draft EIR/EIS and recommended in Syar 2003. In addition, an as-built map and summary of the methods employed should be included in a post-transplant summary report. Monitoring for at least 5 years is also recommended, following the methods outlined in Appendix F of the Supplemental Draft EIR/EIS. It is recommended that Syar submit the mitigation plans prior to the 2006 or 2007 re-planting for review and comment by the SRC.

6. Compliance with Riparian Vegetation Documentation and Data Collection for "Important Stands of Riparian Vegetation"
During year 1 of mining (i.e., 2002) 'Significant stands' of riparian vegetation was defined in the Supplemental Draft EIR/EIS as any riparian vegetation within 25 feet of the low flow channel, on the flood channel banks, floodplain, and terraces areas, or in excess of 1.0 acre within an active gravel bar and normal gravel mining area. These criteria were developed to protect riparian habitat for wildlife species along the riverbanks, to protect aquatic habitat associated with these riparian habitats, and to provide bank stability along the stream margins. The criteria for riparian vegetation and mining, however, are different for year 2 mining (Mitigation Monitoring Plan, page 5-12 in Final Environmental Impacts Statement Syar Industries, Inc. Mining Use Permit Application, Reclamation Plan, and Section 404 Permit Application), as follows: '*In the second year and subsequent years, mining might occur on bars with "important" stands of riparian vegetation to meet river management goals. The SRC shall adopt criteria to define the importance of stands of riparian vegetation prior to the initiation of year 2 and subsequent year mining and reclamation. Using these criteria, the committee will assign an "importance" value to stands of riparian vegetation, as well as determine impacts on riparian habitat on a system-wide basis. The criteria should include:*
- *The level of stratification within a stand and measurement of heights of different canopy layers;*
- *The degree of canopy closure;*
- *The density and species composition of each of the canopy and understory layers; the degree of wildlife utilization (nesting, perching, vocalization, foraging, etc) by target species;*
- *The percentage of each type of riparian vegetation within a specified reach of the river; and*

• *The degree of connection between the stands of vegetation (i.e. continuous/discontinuous spatial arrangement'*
Syar is not taking any significant stands of riparian vegetation according to the proposed 2006 annual gravel harvest plan (other than what the SRC is recommending to transplant on Bar 2), so that they are not removing vegetation at any other location under any criteria for "significance" that was established for year 1 mining or of "importance" that might be established for year 2 mining and in the future. However, even though no 'significant or important stands' of riparian vegetation occur within the proposed mining areas, the riparian vegetation was not mapped to support or document this conclusion for the record. Therefore, the SRC recommends that following 2006 mining, Syar maps from the 2006 aerial photography the locations of existing vegetation and identify the community types present, with field verification, as necessary. In addition, the SRC recommends that the field verification should include the data needed to develop the importance values, as outlined above. If any vegetation is present in the aerial photography or known to have established in the spring or summer of 2006 (e.g. vegetation on Bar 2) that is not present after the mining, this vegetation should be clearly identified. This information should be presented in a summary report to assist the SRC with determining that no significant/important stands of vegetation were disturbed or removed. All subsequent riparian monitoring should include the data outlined above that is required for the evaluation of the importance value of the riparian habitat. The SRC will develop and adopt criteria, in consultation with the County, resource agencies, and Syar, to define the importance of stands of riparian vegetation under its Task B contractual requirements, in the fall 2006 Annual Monitoring Report.

7. Turbidity Monitoring following the "first-flush" high flow events post-mining
The SRC recommends that Syar conduct monitoring of turbidity and/or suspended sediment concentrations, similar to that described in the RWQCB Clean Water Act, Section 401 Water Quality Certification issued on June 25, 2001. The SRC recommends that turbidity monitoring take place during the first two high flow events that inundate the Bar 2 and Bar 13 surfaces. This monitoring will provide evidence as to whether these bar skimming operations are contributing appreciably to turbidity and fine sediment loads within the Russian River. It is further recommended that Syar provide a turbidity monitoring plan for review by the SRC by no later than October 1.

8. Stranding Monitoring Study
The SRC recommends that a stranding monitoring study be developed and implemented in February through May 2007, as high winter flows recede off the bars following mining. It is recommended that Syar develop a detailed monitoring plan for review by the SRC by no later than November 1. The study should include monitoring of mined and un-mined bars for evidence of stranding. The SRC is available to consult with Syar on the elements of a stranding monitoring program that would be desirable.

9. Modification of current habitat monitoring program.
The current habitat monitoring program extends from the downstream end of Bar 3 to the upstream end of Bar 2 and from the downstream of Bar 13 to approximately the confluence of Dry Creek. This extent is based on changes in habitat that occur upstream of Bar 2 and downstream of Bar 13. Regrettably, the areas surveyed do not provide sufficient information to evaluate how mining might affect habitat structure adjacent to and below mined bars, relative to the changes in habitat structure that occur in un-mined reaches. The SRC will discuss this limitation with Syar and evaluate possible avenues to obtain the information necessary to evaluate whether habitat changes are occurring as a result of mining, as opposed to changes resulting from other causes. Recommendations in this regard will be presented in the fall Annual Monitoring Report.

Annual extensive monitoring is required including data gathering and reporting. The use permits issued by Sonoma County under the Aggregate Resource Management Plan (ARM) requires standard and site specific monitoring, including site inspections, full channel cross sections, and annual aerial photographs. Other monitoring and reporting is also required by other involved resource agencies.

Mitigation measures will include revegetation where riparian vegetation is removed as a result of the project, and shall follow SRC recommendation number 5 above, and requirements of other involved resource agencies.

The following measures are proposed to be incorporated in the project to prevent, reduce or eliminate potential impacts, however additional measures may be outlined in the final permit:

- Issuance of future Dredge/Fill Projects will be dependent on review of all monitoring results. In addition, the Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects) permit may be rescinded by the Regional Water Board if violations of the North Coast Regional Water Board's Water Quality Control Plan for the North Coast Region (Basin Plan) occur. Water quality monitoring will consist of turbidity monitoring upstream and downstream of the mining sites during the first flood event that results in flow over the mined areas. The exact monitoring locations and timing will be proposed by the applicant to the satisfaction and approval of the Executive Officer of the Regional Water Board.

- Mining plans and monitoring data submitted to the County of Sonoma PRMD, and the Department of Fish & Game, shall also be submitted to the Regional Water Board.

- The amount of gravel extracted under this certification action shall be based on annual aggregate replenishment rates as outlined in the ARM Plan and SRC recommendations.

- The extraction sites may be visited and assessed by Regional Water Board staff to document compliance with the certification.

- Extraction activities will comply with all provisions contained in the Basin Plan.

- All extraction operations, extraction techniques, reclamation activities, monitoring, project impact minimization measures, revegetation activities and terms of conditions will be implemented as described in the National Marine Fisheries Service Biological Opinion, the final Regional Water Board Order, the California Department of Fish and Game permit, Sonoma County permit, and SRC recommendations.

- Monitoring information received may necessitate modifying the conditions of the permit to provide an adaptive management approach. Conditions and requirements within the 401 Water Quality Certification may be changed/amended by the Regional Water Board within the time period that the 401 Water Quality Certification is issued. Changes may be initiated by factors such as: observations made by or reported to the Regional Water Board, or by recommendations made by the SRC. Such modifications will not require a new permit.

The SMGB, as the lead agency under the California Environmental Quality Act and National Environmental Policy Act, approved an EIR/EIS in December 1997.

The gravel extraction is scheduled to begin in summer 2006 and be completed by the end of October 2006. Staff is proposing to regulate this project pursuant to Section 401 of the Clean Water Act (33 USC 1341) and/or Porter-Cologne Water Quality Control Act Authority. In addition, staff will consider all comments received during a 21-day comment period that begins on the first date of issuance of this letter. If you have any questions or comments, please contact staff member Stephen Bargsten at (707) 576-2653, or at sbargsten@waterboards.ca.gov within 21 days of the posting of this notice.